

Title (en)
STAPLE FIBERS AND PROCESSES FOR MAKING SAME

Title (de)
STAPELFASERN UND VERFAHREN ZU IHRER HERSTELLUNG

Title (fr)
FIBRES DISCONTINUES ET LEURS PROCEDES DE FABRICATION

Publication
EP 1579040 A1 20050928 (EN)

Application
EP 03814882 A 20031217

Priority

- US 0340625 W 20031217
- US 43698902 P 20021230
- US 73399803 A 20031210

Abstract (en)
[origin: WO2004061170A1] A process of making staple fibers of poly(trimethylene terephthalate) includes feeding undrawn yarn (1) to a dip tank (2), forwarding by rolls (3, 4) and wetted under water. Wetted undrawn yarn (1) is forwarded by rolls (5, 6, 7, 8, 10) to a first drawing stage in a dip tank (9) and is partially drawn between rolls (10,11) under water in the dip tank (9). The yarn (1') is then partially drawn by rolls (11, 12, 13, 14, 15, 16) which are driven at a faster speed than roll (10). The partially drawn yarn (1'') is then rewetted by water spray jets (17) and is further drawn by rolls (18, 19, 20, 21) and puller rolls (22, 23) which are driven at a faster speed than roll (16). Nip rolls (5', 8', 14', 22', 25') are used to minimize yarn slippage. After the second drawing, a finish sprayer (24) applies a dilute processing finish to the drawn yarn (1'''), which is then forwarded and maintained under tension by puller rolls (25, 26) into a suffer box crimper (27) by driven crimper nip rolls (26'), where it is crimped and thermofixed by application of steam (28). The crimped yarn (1''') is then forwarded in a relaxed state through a conventional belt dryer (29), cut by a rotary cutter (30) and baled (31) for storage and shipping.

IPC 1-7
D01D 5/16; **D01F 6/62**; **D02G 1/12**; **D02G 1/16**; **D02G 3/02**; **D02J 1/22**; **D04H 1/00**

IPC 8 full level
D01F 6/62 (2006.01); **D02G 1/02** (2006.01); **D02G 1/12** (2006.01); **D04H 1/42** (2012.01)

CPC (source: EP KR US)
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US 0340625 W 20031217; AU 2003297405 A 20031217; CA 2511114 A 20031217; CN 200380108070 A 20031217; EP 03814882 A 20031217; JP 2004565596 A 20031217; KR 20057012235 A 20050629; MX PA05007054 A 20031217; TW 92136700 A 20031224; US 25869908 A 20081027; US 73399803 A 20031210